

1. The table below gives the ages of some math teachers at NPENN HS. Find the minimum and maximum values, quartiles, range, and interquartile range.

| Teacher | Age | Teacher | Age |
|-----------|-----|--------------|-----|
| Curley | 36 | Woodbury | 63 |
| McGinley | 30 | Gourley | 31 |
| Leibowitz | 46 | Crain | 27 |
| Budweg | 26 | Christiansen | 29 |
| Machado | 36 | Hynes | 62 |

Min: 26 Max: 63
 Q: 29 Q: 33.5 Q: 46
 Range: 37 IQR: 17

$$\frac{(31+36)}{2} = 33.5$$



12.3 Box-and-Whisker Plots

In order to draw a box-and-whisker plot, you need to first find the following:

Range: _____
 Quartiles: _____
 Interquartile Range: _____

Example 1: Earthquake intensities are measured on the Richter scale. For the earthquake intensities listed below find the following:

7.2 6.8 8.2 6.8 6.8 7.0 6.5 7.2 7.0
 7.3 6.9 7.1 6.4 7.0 6.6

a. range

b. quartiles

c. interquartile range $Q_3 - Q_1 =$
 $7.2 - 6.8 = 0.4$

You try: Find the range, quartiles, and interquartile range for each set of data.

1.) 75, 90, 53, 85, 75, 83, 73, 80, 46, 89, 91, 93, 85, 95, 68, 88, 97, 70

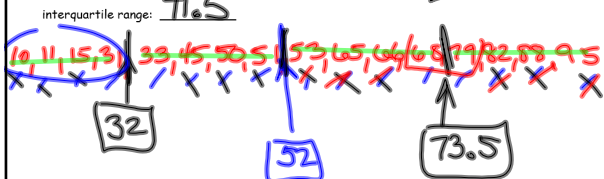
Min: 46 Max: 97
 Q: 73 Q: 84 Q: 90
 Range: 51 IQR: 17

interquartile range: $90 - 73 = 17$

2.) 82, 65, 11, 31, 50, 95, 33, 88, 79, 10, 15, 45, 51, 66, 53, 68

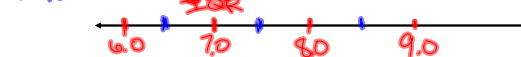
Min: 10 Max: 95
 Q: 32 Q: 52 Q: 73.5
 Range: 85 IQR: 41.5

$$\frac{(68+79)}{2} = 73.5$$



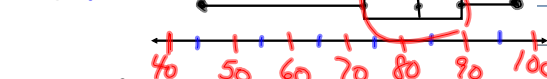
Example 2: Use the data from Example 1 to create a box-and-whisker plot.

Minimum: 6.4 Maximum: 8.2
 Q: 6.8 Q: 7.0 Q: 7.2

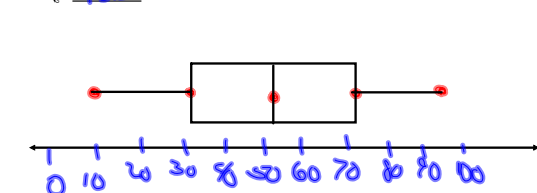


Create box-and-whisker plots for the problems under the "You try" of your notes:

1.) Minimum: 46 Maximum: 97
 Q: 73 Q: 84 Q: 90



2.) Minimum: 10 Maximum: 95
 Q: 32 Q: 52 Q: 73.5



HW

12.3

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